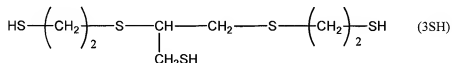## Amendments to the Claims

The following listing of claims will replace all prior versions, and listings, of claims in the application.
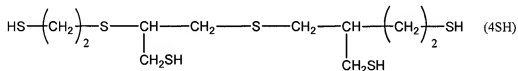
## Listing of the Claims

Claims 1-38    (canceled)

39.     (previously presented)    A thermoset plastic material comprising a three-dimensional matrix containing sulphur atoms and at least one antiplasticizing additive that does not react with said matrix.

40.     (previously presented)  The material of claim 39, wherein the three-dimensional matrix is a polythiourethane matrix or a polyepisulfide matrix.

41.     (previously presented)  The material of claim 40, wherein the polythiourethane matrix is produced by means of a polyaddition reaction of a NCO end group-containing polythiourethane prepolymer with a SH end group-containing polythiourethane prepolymer.

42.     (previously presented)  The material of claim 41, wherein the NCO end group-containing polythiourethane prepolymer has a number average molecular weight ranging from 1000 to 2000.

43.     (previously presented)  The material of claim 41, wherein the NCO end group-containing polythiourethane prepolymer has a NCO/SH ratio from 4:1 to 30:1.

44.     (previously presented)  The material of claim 41, wherein the SH end group-containing polythiourethane prepolymer has a number average molecular weight ranging from 200 to 300.

45.     (previously presented)  The material of claim 41, wherein the SH end group-containing polythiourethane prepolymer has a SH/NCO ratio ranging from 4:1 to 30:1.

46.    (previously presented) The material of claim 41, wherein the NCO end group-containing polythiourethane prepolymer and/or the SH end group-containing polythiourethane prepolymer results from the polyaddition of xylene diisocyanate and/or dimethyl norbornyl diisocyanate with polythiol of formula:

$$HS-(CH_2)_2-S-CH-CH_2-S-(CH_2)_2-SH \qquad (3SH)$$
$$\qquad\qquad\qquad\qquad |$$
$$\qquad\qquad\qquad CH_2SH$$

and/or

$$HS-(CH_2)_2-S-CH-CH_2-S-CH_2-CH-(CH_2)_2-SH \quad (4SH)$$
$$\qquad\qquad\qquad |\qquad\qquad\qquad\qquad |$$
$$\qquad\qquad CH_2SH\qquad\qquad\qquad CH_2SH$$

47.    (previously presented) The material of claim 39, wherein antiplasticizing additive has an antiplasticization temperature in the range of temperatures from 0 to 85°C.

48.    (currently amended) The material of claim 39, wherein the antiplasticizing additive has a solubility parameter $\delta_a$, wherein:

$$\delta_{mo} - \delta_a < 5 \text{ MPa}^{1/2}$$

and $\delta_{mo}$ is a solubility parameter of polyisocyanate and polythiol monomers used to produce the ~~polythiourethane~~ matrix.

49.    (previously presented) The material of claim 39, wherein the antiplasticizing additive has a solubility parameter $\delta_a$, wherein:

$$\delta_{ma} - \delta_a > 4 \text{ MPa}^{1/2}$$

and $\delta_{ma}$ corresponds is a solubility parameter of the matrix.

50.    (previously presented) The material of claim 39, wherein the antiplasticizing additive has a solubility parameter $\delta_a$, wherein:

$$19 \leq \delta a \leq 23.$$

51.    (currently amended) The material of claim 39, wherein the antiplasticizing additive is a dialkyl sulfide, diaryl sulfide, dialkylaryl sulfide, alkylaryl sulfide, ~~aryl sulfide, alkylaryl~~

sulfide, arylalkyl aryl sulfide, aryl silane sulfide, alkyl silane alkylsilane sulfide, a compound containing a carbonyl derivative group, S-arylthioalkylate, bis-arylthioalkyl, a compound containing a thiourea derivative group, a compound containing a urethane derivative group, or a compound containing a diurethane derivative group.

52.   (previously presented)   The material of claim 51, wherein the antiplasticizing agent comprises a sulfide of formula:
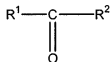
$$R^1 — S — R^2$$

wherein $R^1$ and $R^2$ are independently an alkyl radical, a cycloalkyl radical, an aryl radical; an arylalkyl radical, a radical:

$$R — \overset{\displaystyle \underset{\| }{O}}{C} —$$

wherein R is an alkyl radical, or a trialkyl silane radical.

53.   (currently amended)   The material of claim 51, wherein the antiplasticizing agent is a carbonyl derivative group of formula:
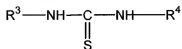
$$R^1 — \overset{\displaystyle \underset{\| }{O}}{C} — R^2$$

wherein $R^1$ and $R^2$ are independently an alkyl radical, a cycloalkyl radical, an aryl radical, an arylalkyl radical, a radical:

$$R — \overset{\displaystyle \underset{\| }{O}}{C} —$$
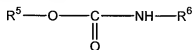
wherein R is an alkyl radical, or a trialkyl silane radical.

54.   (currently amended)   The material of claim 51, wherein the antiplasticizing agent is a thiourea derivative group of formula:

$$R^3 — NH — \overset{\displaystyle \underset{\| }{S}}{C} — NH — R^4$$

wherein $R^3$ and $R^4$ are independently an alkyl radical, a cycloalkyl radical, an alkyl radical bearing a nitrogen and/or an oxygen heterocycle.

55.    (previously presented)  The material of claim 54, wherein at least one of $R^3$ and $R^4$ is a $C_1$-$C_{12}$ alkyl radical, a 6-membered radical, or a 4-morpholinoalkyl radical.
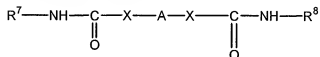
56.    (currently amended)  The material of claim 51, wherein the antiplasticizing agent is a urethane ~~derivative~~ group of formula:

$$R^5 \!-\!\!-\! O \!-\!\!-\! \underset{\underset{O}{\|}}{C} \!-\!\!-\! NH \!-\!\!-\! R^6$$
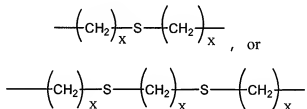
wherein $R^5$ and $R^6$ are independently a cycloalkyl group, a cycloalkyl alkyl group, an aryl group, or an arylalkyl group.

57.    (previously presented)  The material of claim 56, wherein at least one of $R^5$ and $R^6$ is a 6-membered radical, a cyclohexylalkyl group, a phenyl group, or a phenylpropyl group.

58.    (currently amended)  The material of claim 51, wherein the antiplasticizing agent is a ~~thiourethane derivative~~ diurethane group of formula:
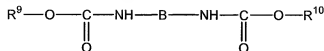
$$R^7 \!-\!\!-\! NH \!-\!\!-\! \underset{\underset{O}{\|}}{C} \!-\!\!-\! X \!-\!\!-\! A \!-\!\!-\! X \!-\!\!-\! \underset{\underset{O}{\|}}{C} \!-\! NH \!-\!\!-\! R^8$$

wherein A is a $C_1$-$C_{12}$ alkylene group,

$$-\!\!\left(CH_2\right)_{\!x}\!\!-\!S\!-\!\!\left(CH_2\right)_{\!x}\!\!- \text{ , or}$$

$$-\!\!\left(CH_2\right)_{\!x}\!\!-\!S\!-\!\!\left(CH_2\right)_{\!x}\!\!-\!S\!-\!\!\left(CH_2\right)_{\!x}\!\!-$$
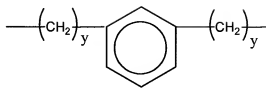
wherein x is an integer ranging from 1 to 6 and wherein X is -O- or -S- and $R^7$ and $R^8$ are independently a cycloalkyl group or aryl group.

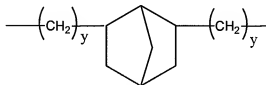59.    (currently amended)  The material of claim 51, wherein the antiplasticizing agent is a diurethane ~~derivative~~ group of formula:
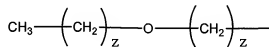
$$R^9 \!-\!\!-\! O \!-\!\!-\! \underset{\underset{O}{\|}}{C} \!-\!\!-\! NH \!-\!\!-\! B \!-\!\!-\! NH \!-\!\!-\! \underset{\underset{O}{\|}}{C} \!-\!\!-\! O \!-\! R^{10}$$

wherein B is a radical of formula:

or



wherein y is an integer ranging from 1 to 4 and $R^9$ and $R^{10}$ are independently a cycloalkyl alkyl radical, an aryl ($C_1$-$C_6$)alkyl radical, a (bridged) cycloalkyl ($C_1$-$C_6$)alkyl radical, or an ether-oxide radical of formula:



wherein z is an integer ranging from 1 to 4.

60.   (previously presented)  The material of claim 51, wherein the antiplasticizing additive is dioctyl sulfide, benzyl and phenyl sulfide, dibenzyl sulfide, 4-(p-tolylthio)benzophenone, bis(phenylthio)methane, S-phenylthiopropionate, phenylthiomethyltrimethyl silane, 1-cyclohexyl-3-(2-morpholinoethyl)-2-thiourea, cyclohexylpropylcyclohexyl urethane, phenylpropylcyclohexyl-(octane diurethane), cyclohexylpropyl-cyclohexylpropylxylylene diurethane, cyclohexylethyl-cyclohexylethylxylylene diurethane, phenylpropyl-phenylmethane, propoxyethyl-propoxyethylxylylene diurethane, norbornanemethyl-norbornanemethylxylylene diurethane, phenylpropyl-phenylpropylxylylene diurethane, cyclohexyl-cyclohexyl (thiodiethane di-S-thiourethane), phenyl-phenyl (thiodiethane di-S-thiourethane), cyclohexyl-cyclohexyl (dithiaoctane diurethane), cyclohexylpropyl-cyclohexylpropyl dimethyl norbornane diurethane, cyclohexylethyl-cyclohexylethyldimethyl norbornane diurethane, propoxyethyl-propoxyethyldimethyl norbornane diurethane, norbornanemethyl-norbornanemethyldimethyl norbornane diurethane, phenylpropyl-phenylpropyl-dimethyl

norbornane diurethane, cyclohexyl-cyclohexyl (thiodiethane diurethane), or phenyl-phenyl (thiodiethane diurethane).

61. (previously presented)  The material of claim 51, wherein the antiplasticizing has one of the formulae:



;



;
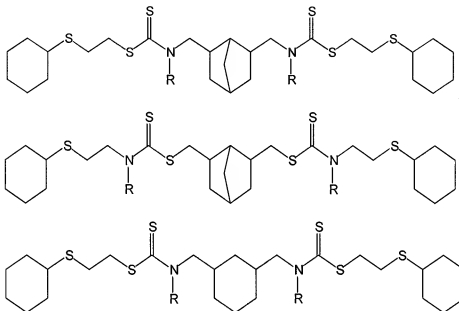


or
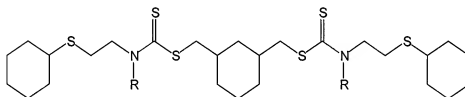


wherein R is H, an alkyl group, or an aryl group.

62. (currently amended)  The material of claim 39, wherein the antiplasticizing additive is present in amount ranging from 5 to 25% by weight of the total weight of the polythiourethane matrix.

63. (currently amended)  The material of claim 62, wherein the antiplasticizing additive is present in amount ranging from 5 to 15% by weight of the total weight of the polythiourethane matrix.

64.     (currently amended)  The material of claim 39, wherein the ~~polythiourethane~~ matrix is producible by polyaddition of at least one polyisocyanate and at least one polythiol.

65.     (previously presented)  The material of claim 64, wherein the polyisocyanate is a diisocyanate.

66.     (previously presented)  The material of claim 64, wherein the polythiol is a tri- or tetrathiol.

67.     (previously presented)  The material of claim 64, wherein the polyisocyanate an aromatic polyisocyanate, aliphatic polyisocyanate, or cycloaliphatic polyisocyanate.

68.     (previously presented)  The material of claim 67, wherein the polyisocyanate is phenylene diisocyanate, ethylphenylene diisocyanate, isopropylphenylene diisocyanate, dimethylphenylene diisocyanate, diethylphenylene diisocyanate, diisopropylphenylene diisocyanate, trimethylbenzyl triisocyanate, xylylene diisocyanate (XDI), benzyl triisocyanate, 4,4'-diphenylmethanediisocyanate and isophorone diisocyanate, hexamethylene diisocyanate, bis(isocyanate)methyl cyclohexane, dicyclohexyl methane diisocyanate, dimethyl norbornyl diisocyanate (NDI), or norbornyl methyl diisocyanate.

69.     (previously presented)  The material of claim 64, wherein the polythiol is:

$$R'(SH)_{n'}$$

wherein R' is an organic group the valence of which corresponds to n'; where n' is an integer ranging from 2 to 6.
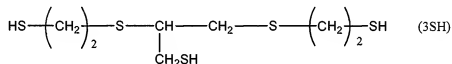
70.     (previously presented)  The material of claim 69, wherein the polythiol has following formula:
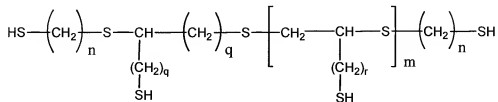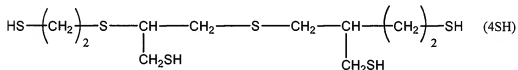


wherein n is an integer ranging from 1 to 4, p, q and r are integers ranging from 1 to 4, and m is the integer 1 or 2.

71.    (previously presented)  The material of claim 70, wherein the polythiol is penthaerythritol tetrakis mercaptopropionate, 1-(1'-mercaptoethylthio)-2,3-dimercapto propane, 1-(2'mercaptopropylthio)-2,3-dimercapto propane, 1-(3'-mercaptopropylthio)-2,3-dimercapto propane, 1-(4'-mercaptobutylthio)-2,3-dimercapto propane, 1-(5'-mercaptopenthylthio)-2,3-dimercapto propane, 1-(6'-mercaptohexylthio)-2,3-dimercapto propane, 1,2-bis(4'-mercaptobutylthio)-3,mercapto propane, 1,2-bis(6'-mercaptohexyl)-3-mercapto propane, 1,2,3-tris(mercaptomethylthio)propane, 1,2,3-tris(3'-mercaptopropylthio) propane, 1,2,3-tris(2'-mercaptoethylthio)propane, 1,2,3-tris-(4'-mercaptobutylthio)propane, 1,2,3-tris(6'-mercaptohexylthio)propane, 1,6-hexanethiol-1,2,3-propanetritiol, or 1,2-bis(2'-mercaptoethylthio)-3-mercapto propane.

72.    (previously presented)  The material of claim 71, wherein the polythiol has following formula:

$$HS-(CH_2)_2-S-CH-CH_2-S-(CH_2)_2-SH \quad (3SH)$$
$$| \atop CH_2SH$$

or

$$HS-(CH_2)_2-S-CH-CH_2-S-CH_2-CH-(CH_2)_2-SH \quad (4SH)$$
$$\qquad | \qquad\qquad\qquad\qquad | \atop CH_2SH \qquad\qquad\qquad\quad CH_2SH$$

73.    (previously presented)  The material of claim 39, further defined as having a phase separation.

74.    (previously presented)  The material of claim 73, further defined as having a nanophase separation.

75.    (previously presented)  The material of claim 39, further defined as having an energy release ratio $G_{IC}$ of at least 0.15 kJ.m$^{-2}$.

76.    (previously presented)  An ophthalmic lens comprising an optically transparent, thermoset plastic material, comprising a three-dimensional polymer matrix, the loss

modulus (E'') of which presents a secondary glass transition ($\beta$), and at least one antiplasticizing additive.

77.     (previously presented)  The ophthalmic lens of claim 76, wherein the thermoset material has a nanophase separation.

78.     (previously presented)   The ophthalmic lens of claim 76, wherein the matrix is a polyurethane matrix or a matrix producible by polymerizing a composition comprising at least one polyepisulfide.

79.     (previously presented)  The ophthalmic lens of claim 76, wherein the antiplasticizing additive has a solubility parameter $\delta_a$ and:

$$\delta_{mo} - \delta_a < 5 \ MPa^{1/2}$$

wherein $\delta_{mo}$ corresponds to the solubility parameter of polyisocyanate and polythiol monomers used to produce the polythiourethane matrix.

80.     (previously presented)  The ophthalmic lens of claim 76, wherein the antiplasticizing additive has a solubility parameter $\delta_a$ and:

$$\delta_{ma} - \delta_a > 4 \ MPa^{1/2}$$

wherein $\delta_{ma}$ corresponds to the solubility parameter of the matrix.

81.     (previously presented)  The ophthalmic lens of claim 76, wherein the thermoset material comprises a three-dimensional matrix containing sulphur atoms and at least one antiplasticizing additive that does not react with said matrix.

82.     (previously presented)  A method of making an ophthalmic lens comprising obtaining a thermoset plastic material of claim 39, and using the material to form a lens.